

IN THE CLAIMS:

Claim 1 (currently amended): A method of manufacturing a substrate from a hard material substrate for removing hard material layers from hard metal substrates having a hard material layer with pores and an intermediate layer of a chemically different material from the hard material layer, disposed between the hard metal substrate and the hard material layer by employing a layer removal solution, the method comprising:

selected the hard material layer and the intermediate layer to be made of respective materials that dissolve in a selected layer removal solution so that the material of the intermediate layer is more readily dissolved in the removal solution than the material of the hard material layer during a selected time period;

applying the selected removal solution to the hard material layer so that the removal solution penetrates the pores of the hard material layer and contacts the intermediate layer to dissolve at least some of the intermediate layer to at least partly release the hard material layer from the hard metal substrate; and

after at least some of the intermediate layer has been dissolved by the removal solution, removing the hard material layer from the hard metal substrate.

introducing between a hard metal substrate and a hard material layer; and
selectively dissolving the intermediate carrier layer by employing, through pores of the hard material layer, a layer removal solution, which, within a treatment time period, dissolves the material of the intermediate carrier layer more than the material of the hard material layer, such that through this selective dissolving of the material of the intermediate carrier layer through the pores of the hard material layer, the hard material layer is removed before it is dissolved as much as the intermediate carrier layer.

Claim 2 (original): A method as claimed in claim 1, including introducing a TiN layer

as the intermediate carrier layer.

Claim 3 (currently amended): A method as claimed in claim 2, wherein the hard material layer comprises a layer of $(E_1, E_2 \dots E_n) X$, with

E_x : being an element number n from one of the groups 4, 5, 6, 13, 14 of the Periodic Table of Elements of the New IUPAC Notation,

X : being at least one element selected from the group consisting of N, C, and O, and

n : being a running parameter, with $n \geq 1$.

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Claim 4 (original): A method as claimed in claim 3, wherein $n = 2$.

Claim 5 (currently amended): A method as claimed in claim 2, wherein a the layer thickness of the intermediate layer (d_z) is selected to be $0.01 \mu m \leq d_z \leq 0.5 \mu m$.

Claim 6 (original): A method as claimed in claim 5, wherein the layer thickness of the intermediate layer (d_z) is selected to be $0.01 \mu m \leq d_z \leq 0.3 \mu m$.

Claim 7 (original): A method as claimed in claim 5, wherein the layer thickness of the intermediate layer (d_z) is selected to be $0.01 \mu m \leq d_z \leq 0.2 \mu m$.

Claim 8 (original): A method as claimed in claim 3, wherein the elements E_x comprise at least one of aluminum, silicon, chromium or boron.

Claim 9 (currently amended): A method as claimed in claim 2, wherein the hard

material layer comprises a CrC, CrN, CrCN or ~~WC-C~~ WCC layer.

Claim 10 (currently amended): A method as claimed in claim 9, wherein the hard material layer is a CrC, CrN, CrCN or ~~WC-C~~ WCC layer.

Claim 11 (original): A method as claimed in claim 2, wherein the hard material layer comprises at least one of a TiAlN or a TiCrN layer.

Claim 12 (original): A method as claimed in claim 2, wherein the hard material layer comprises a TiAlN layer.

91 Claim 13 (currently amended): A method as claimed in claim 12, wherein the hard material layer is only a TiAlN layer.

Claim 14 (original): A method as claimed in claim 2, wherein the hard material layer has a thickness of at least 2 μm .

Claim 15 (currently amended): A method as claimed in claim 2, wherein a hydrogen peroxide solution ~~is used as~~ comprises the layer removal solution

Claim 16 (original): A method as claimed in claim 15, wherein the hydrogen peroxide solution is maximally 50 wt.% hydrogen peroxide.

Claim 17 (original): A method as claimed in claim 15, wherein the hydrogen peroxide solution is maximally 20 wt.% hydrogen peroxide.

Claim 18 (original): A method as claimed in claim 15, wherein NaOH is included in the solution.

Claim 19 (currently amended): A method as claimed in claim 18, wherein in the solution comprises maximally 5.0 wt.% NaHO ~~is in the solution~~.

Claim 20 (currently amended): A method as claimed in claim 18, in the solution comprises maximally 0.5 wt.% NaHO ~~is in the solution~~.

91 Claim 21 (original): A method as claimed in claim 15, wherein at least one of the substances disodium oxalate and KNa tartrate tetrahydrate are included in the solution.

Claim 22 (original): A method as claimed in claim 21, wherein the at least one of the substances disodium oxalate and KNa tartrate tetrahydrate are included in the solution at maximally 5 wt.%.

Claim 23 (currently amended): A method as claimed in claim 15, wherein the solution comprises, ~~consists~~ exclusively of water, hydrogen peroxide, NaHO and at least one of the substances disodium oxalate and KNa tartrate tetrahydrate.
